

Observations of Contacts with Shadow.

| Phenomenon. | Observer. | G.M.T. | | |
|----------------------------------|-----------|--------|----|-----|
| | | h | m | s |
| First Contact with Shadow | A. C. | 13 | 55 | 4 |
| | B. | 13 | 53 | 23 |
| Beginning of Totality | A. C. | 14 | 52 | 5 |
| | B. | 14 | 51 | 55 |
| | H. F. | 14 | 52 | 6 |
| End of Totality | A. C. | 16 | 25 | 13* |

Royal Observatory, Greenwich :
1895 March 26.

Observations of Occultations of Stars during the Total Lunar Eclipse of 1895 March 10 at the Radcliffe Observatory, Oxford.

(Communicated by E. J. Stone, M.A., F.R.S., Radcliffe Observer.)

The following occultations were observed by Mr. Wickham with the 10-inch Barclay equatorial, using power 90 and solar chronometer; and by Mr. Robinson with the 7.5-inch heliometer, using power 80 and sidereal clock. The night was exceptionally fine.

| Name of Star. | Mag. | Phenomenon. | Time noted. | | | G.M.T. of Observation. | Observer. |
|--------------------|------|---------------|-------------|----|-------|------------------------|-----------|
| | | | h | m | s | h m s | |
| 83 Leonis | 7.5 | Disappearance | 14 | 17 | 33.3 | 14 15 32.1 | W. |
| " | " | " | 13 | 23 | 49.0 | 14 15 32.3 | R. |
| Piazzi XI. 71 | 8.0 | " | 14 | 18 | 11.25 | 14 16 10.0 | W. |
| " | " | " | 13 | 24 | 27.0 | 14 16 10.2 | R. |
| τ Leonis | 5.0 | " | 14 | 56 | 24.9 | 14 54 23.4 | W. |
| " | " | " | 14 | 2 | 46.3 | 14 54 23.2 | R. |
| W.B. XI. 349 | 8.2 | " | 14 | 56 | 42.9 | 14 54 41.4 | W. |
| " | " | " | 14 | 3 | 4.5 | 14 54 41.4 | R. |
| 83 Leonis | 7.5 | Reappearance | 15 | 13 | 8.8 | 15 11 7.1 | W. |
| " | " | " | 14(19) | 32 | 5 | 15 11 6.6 | R. |
| Piazzi XI. 71 | 8.0 | " | 15 | 14 | 12.0 | 15 12 10.4 | W. |
| " | " | " | 14(20) | 35 | 9 | 15 12 9.9 | R. |
| Arg. Z. + 3°, 2501 | 9.5 | " | 15 | 18 | 32 | 15 16 30.3 | W. |
| W.B. XI. 372 | 8.8 | Disappearance | 15 | 35 | 26.3 | 15 33 24.5 | W. |
| " | " | " | 14 41 | 54 | 25 | 15 33 24.7 | R. |
| τ Leonis | 5.0 | Reappearance | 15 | 45 | 6.3 | 15 43 4.4 | W. |
| " | " | " | 14 51 | 35 | 6 | 15 43 4.4 | R. |
| W.B. XI. 349 | 8.2 | " | 15 | 48 | 35.8 | 15 46 33.9 | W. |
| W.B. XI. 372 | 8.8 | " | 16 | 10 | 59.8 | 16 8 57.7 | W. |

* Rough observation; cloudy.

Observers' Remarks.

Mr. Wickham : Arg. Z. + 3° , 2501.—The time noted may be 1^{s} late. Star very faint. W.B. XI. 365.—Having watched for several minutes after the predicted time, given in *The Observatory* for March 1895, for the reappearance, I had just given up the count when the star flashed out from the limb. I then picked up the count of the seconds, and on reference to the chronometer inferred the approximate time of reappearance to be $15^{\text{h}} 59^{\text{m}} 46^{\text{s}}$, or $15^{\text{h}} 57^{\text{m}} 44^{\text{s}}$ G.M.T.

At $15^{\text{h}} 36^{\text{m}}$ G.M.T., about the middle of the eclipse, examined the Moon by naked eye. The usual deep copper colour prevailed; the large blackish patch, occupying the centre, and diminishing in darkness towards the limb, was a striking feature of the eclipse. The effects of irradiation were strongly marked as the Moon emerged from the shadow; the illuminated portion, by contrast, appeared intensely bright, and distinctly projected beyond the darkened limb. During totality the background of the sky was very black, the Milky Way, clusters, and small stars being unusually well defined. The definition in the telescope was very good, and at totality the markings of the Moon were easily distinguished near the limb, but not at the centre.

Mr. Robinson : The observations were in every case satisfactory. All the occultations were instantaneous, excepting only the reappearance of τ Leonis, which seemed to take about $0^{\text{s}}.2$ in acquiring full brightness. When the total phase of the eclipse was nearly complete the uneclipsed crescent presented a distinctly blue colour by contrast with the usual ruddy hue, which was very pronounced over the rest of the disc.

Radcliffe Observatory, Oxford :
1895 March 19.

Note on the Total Eclipse of the Moon, 1895 March 10.

By H. F. Newall, M.A.

The following occultations of stars were observed with the Newall Telescope, Cambridge Observatory, during the eclipse, under very favourable atmospheric conditions. The times were noted on a chronometer beating 100 to a minute. The writer observed within earshot of the chronometer, and at the moment of a disappearance or reappearance of a star began counting with the chronometer, having previously been attentive to the beats; his assistant, A. W. Goatcher, took up the counting and read off the chronometer.

With one exception, the recorded observations are considered certain within half a beat of the chronometer, that is, within $0^{\text{s}}.3$. The recorded time for the reappearance of the star No. 5 on Dr. Döllén's list is considered possibly $0^{\text{s}}.6$ late.

The observations were made with the aperture 24 inches, and with the micrometer with magnifying power 307. A micrometer wire was set so as to be a chord of a small arc of the limb of the Moon, with the observed star at the middle of the arc, as near as possible to the moment at which the star was observed to be disappearing or to have reappeared; and the parallel was determined by allowing a star to trail along the wire; from